

CO3	*	*	*	*	*	*		*	
CO4	*	*	*	*	*	*		*	

Wks Mapped with the course

WK1	WK2	WK3	WK4	WK5	WK6	WK7	WK8	WK9
*	*	*	*	*	*		*	

Mark Distribution:

Total Marks	CIE Marks	ESE Marks	ESE Duration
100	50	50	2.5 hrs

Continuous Internal Evaluation Pattern:

Attendance : 5 marks

Preparation/Pre-Lab Work, Viva and Timely completion of Lab Reports : 25 marks

Internal Examination : 20 marks

SYLLABUS

List of Experiments

1. Design a database schema for an application with ER diagram from a problem description. *
2. Creation of database schema - DDL (create tables, set constraints, enforce relationships, create indices, delete and modify tables). *
3. Database initialization - Data insert, Data import to a database. *
4. Implement DML commands: Insert, Update, Delete and data import.
5. Implementation of various aggregate functions.
6. Implementation of Order By, Group By & Having clause in SQL. *
7. Implement set operators, nested queries and subqueries. *
8. Implement join operations: Natural join, Equi join, Inner join, Outer join.
9. Implement SQL TCL commands: COMMIT, ROLLBACK, SAVEPOINT.
10. Implement SQL DCL commands: GRANT and REVOKE user privilege.
11. Creation and implementation of Views and Assertions. *
12. Creation of Procedures, Triggers, Functions.
13. Creation of Packages and cursors.
14. Design a database application using any front-end tool.
15. Perform basic CRUD operations on a Cassandra table.
16. Create a simple application using MongoDB. **Mandatory ***

Text Books:

1. Silberschatz, A., Korth, H. F., & Sudarshan, S. (2011). Database system concepts (6th ed.). McGraw-Hill.
2. Elmasri, R., & Navathe, S. B. (Latest ed.). Fundamentals of database systems. Pearson.

Reference Books:

1. Fowler, A. (2015). NoSQL for dummies (1st ed.). John Wiley & Sons.
2. Pivert, O. (2018). NoSQL data models: Trends and challenges (1st ed.). Wiley.
3. McCreary, D., & Kelly, A. (2014). Making sense of NoSQL (1st ed.). Manning Publications.